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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,376	05/08/2006	Oliver Moeller	265774US0X PCT	5194
22850 7590 06/01/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WITHERSPOON, SIKARL A	
			ART UNIT 1621	PAPER NUMBER
			NOTIFICATION DATE 06/01/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/525,376	Applicant(s) MOELLER ET AL.	
	Examiner Sikar A. Witherspoon	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/23/05,4/27/05,5/8/06,9/20/06,10/13/06,11/8/06.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Drago et al (US 5,012,008).

Drago et al disclose the hydroformylation of propylene in the presence of 0.08 grams of propylene carbonate and a rhodium catalyst to produce the corresponding aldehyde (example 1, col. 8, lines 1-15). This process anticipates the instant claims.

Claims 1, 3, 4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Massie (US 3,992,453).

Massie discloses a process wherein an olefinically unsaturated compound is hydroformylated in n-pentane as solvent, and in the presence of a transition metal catalyst and ethylene carbonate (see examples, especially example II). This process anticipates the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1621

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 6-8, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago et al (US 5,012,008) and Massie (US 3,992,453) in combination.

The instant claims limit the hydroformylation process of the present invention to the use of a cyclic carbonic ester of formula I having specific substituents, and to separation of the output coming from the hydroformylation into different fractions and recycling unreacted olefin and catalyst-containing fractions.

Drago et al do not expressly teach these limitations; however, Drago et al do teach the hydroformylation of olefins having from 2 to 6 carbon atoms in the presence of a liganded rhodium catalyst, and *substituted or unsubstituted* organic esters, aromatic hydrocarbons, *organic derivatives of oxygen, such as propylene carbonate*, etc., (col.4, line 52 to col. 6, line 55). Massie teaches a hydroformylation process wherein an ester of carbonic acid, i.e., ethylene carbonate, propylene carbonate, dipropyl carbonate, etc., is used as a promoter, in an amount of at least 15 by weight (col. 4, line 34 to col. 7, line 28). Massie also teaches that the reaction can be conducted in a continuous manner, wherein the reactor effluent is continuously withdrawn and subjected to conventional means of separation whereby the desired hydroformylation product is recovered, and any carbonic acid ester and unreacted starting material and regenerated catalyst may be recycled to the reaction zone (col. 5, lines 40-65).

Art Unit: 1621

The examiner contends that it would have been obvious to a person of ordinary skill in the art, at the time the present invention was made, to employ as starting material, an olefinically unsaturated compound that has been recycled from the unreacted starting material of a first or previous hydroformylation or any other source of olefinic compound. It would also have been obvious to employ a substituted cyclic carbonic ester in the process taught by Drago et al, since the reference teaches that organic derivatives of oxygen, such as propylene carbonate, may be substituted, and further, since Massie teaches several carbonic acid esters as a promoter in hydroformylation reactions in amounts of at least 1% by weight; a person of ordinary skill would reasonably expect the substituted or unsubstituted compound to be effective in its purpose, i.e., dispersing the rhodium catalyst and maintaining it in amorphous phase on the support material (col. 6, lines 34-55) according to Drago et al, and/or in increasing the linear selectivity of the desired product, according to Massie.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 and 8-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-14, and 20 of U.S. Patent No. 7,193,116. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are simply broader in scope than those of the patent in that the instant claims only require a metal of groups 8 to 10 of the Periodic Table of Elements, while the claims of the patent specifically recite rhodium. There is no patentable distinction between the instant claims and those of the U.S. patent since the rhodium recited in the patent is encompassed by the broader recitation in the instant claims.

Specification

The disclosure is objected to because of the following informalities: a brief description of the drawings is missing. Appropriate correction is required.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

saw

Sikarl A. Witherspoon

SIKARL A. WITHERSPOON
PRIMARY EXAMINER